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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

WANG, JIN CHENG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2672 | |

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/864,107 | VAN LIERE, FILIPS |
| Examiner | Art Unit | |
| Jin-Cheng Wang | 2672 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The applicant or their representatives are urged to review the specification for all mistakes of a clerical or typographical nature. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: On page 13, lines 6-7 of claim 19, “a associated imaged medical object” should be “an associated imaged medical object”. Appropriate correction of all mistakes is required.

Claim Objections

3. Claim 19 is objected to because of the following informalities: On lines 6-7 of claim 19, “a associated imaged medical object” should be “an associated imaged medical object”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 10-13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Echerer et al. U.S. Pat. No. 5,740,267.

6. Claim 1:

U.S. Pat. No. 5,740,267 to Echerer teaches a method for processing cursored user interaction (column 8, lines 37-67, column 9, lines 1-23) with a spatially displayed medical image (column 7, lines 21-29) for producing graphics related data on such image (column 12, lines 42-56), being characterized in that mouse positionings and/or actuations (column 13, lines 11-49) will control inherent measuring functionalities (column 8, lines 37-67, column 9, lines 1-23) as being immediately based on relative such positionings (column 13, lines 11-49) with respect to an associated imaged medical object (column 7, lines 21-29, column 12, lines 42-56).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/pr a pixel intensity quantity to the point in question. However, Echerer further discloses the claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/pr a pixel intensity quantity to the point in question (column 12, lines 42-56).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question. However, Echerer further discloses the claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question (column 13, lines 12-49, column 15, lines 9-11).

Claim 4:

The claim 4 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a triple-point actuating/positioning assigns an angle value quantity to a

middle point of the triple. However, Echerer further discloses the claimed limitation that a triple-point actuating/positioning assigns an angle value quantity to a middle point of the triple (column 15, lines 12-19).

7. Claims 10-13:

The claim 10, 11, 12, 13 encompasses the same scope of invention as that of claim 1, 2, 3, 4 respectively except additional claimed limitation of “an apparatus”. However, Echerer further discloses the claimed limitation of “an apparatus” (column 5, lines 12-37).

Claim 19:

The claim 19 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of a machine readable computer program. However, Echerer further discloses the claimed limitation of “a machine readable computer program (column 9, lines 30-36, figures 6-9).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-9 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echerer et al. U.S. Patent No. 5,740,267 in view of Fenster et al. U.S. Patent No. 5,454,371.

10. Claim 5:

(a) The claim 5 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that “multiple-point actuating/positioning for an open or closed

point sequence assigns an area value quantity to a concave region delimited by the sequence in question".

(b) However, Echerer is silent on the claimed limitation that "multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question".

(c) Fenster teaches the claimed limitation that "multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question" (Fenster column 23, lines 32-39).

(d) It would have been obvious to one of ordinary skill in the art to have incorporated the Fenster's "measure area" approach using the graphical input device into Echerer's method of processing cursored user interaction because Echerer implicitly suggests "measure areas" for medical image manipulation using a cursor device (column 9, lines 1-16) and therefore suggesting an obvious modification of the Echerer's method for processing a radiograph. Moreover, both references have addressed the same subject matter relating to the method for processing radiographic images (Echerer's abstract and Fenster's abstract).

(e) One having the ordinary skill in the art would have been motivated to do this because it would have enabled a user of the graphical input device to measure a variety of image quantities such as distances and areas of the medical image within the image plane to allow the display technique to be used in clinical ultrasound machine and computer (column 23, lines 25-39, column 24, lines 20-35).

11. Claim 6:

(a) The claim 6 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that “a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question”.

(b) However, Echerer is silent on the claimed limitation that “a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question”.

(c) Fenster teaches the claimed limitation that “a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question” (Fenster column 23, lines 32-39).

(d) It would have been obvious to one of ordinary skill in the art to have incorporated the Fenster’s “measure area” approach using the graphical input device into Echerer’s method of processing cursored user interaction because Echerer implicitly suggests “measure areas” for medical image manipulation using a cursor device (column 9, lines 1-16) and therefore suggesting an obvious modification of the Echerer’s method for processing a radiograph. Moreover, both references have addressed the same subject matter relating to the method for processing radiographic images (Echerer’s abstract and Fenster’s abstract).

(e) One having the ordinary skill in the art would have been motivated to do this because it would have enabled a user of the graphical input device to measure a variety of image quantities such as distances and areas of the medical image within the image plane to allow the display technique to be used in clinical ultrasound machine and computer (column 23, lines 25-39, column 24, lines 20-35).

12. Claim 7:

(a) The claim 7 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of “a multiple-point actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn”.

(b) However, Echerer is silent on the claimed limitation of “a multiple-point actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn”.

(c) Fenster teaches the claimed limitation of “a multiple-point actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn” (overall line length, Fenster column 23, lines 32-39).

(d) It would have been obvious to one of ordinary skill in the art to have incorporated the Fenster’s “measure overall line length” approach using the graphical input device into Echerer’s method of processing cursored user interaction because Echerer implicitly suggests “measure circumferences” for the area encircled by line segments in medical image manipulation using a cursor device (column 9, lines 1-16) and therefore suggesting an obvious modification of the Echerer’s method for processing a radiograph. Moreover, both references have addressed the same subject matter relating to the method for processing radiographic images (Echerer’s abstract and Fenster’s abstract).

(e) One having the ordinary skill in the art would have been motivated to do this because it would have enabled a user of the graphical input device to measure a variety of image quantities such as distances and areas of the medical image within the image plane to allow the

display technique to be used in clinical ultrasound machine and computer (column 23, lines 25-39, column 24, lines 20-35).

13. Claim 8:

- (a) The claim 8 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of “a freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn”.
- (b) However, Echerer is silent on the claimed limitation of “a freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn”.
- (c) Fenster teaches the claimed limitation of “a freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn” (overall line length, Fenster column 23, lines 32-39).
- (d) It would have been obvious to one of ordinary skill in the art to have incorporated the Fenster’s “measure overall line length” approach using the graphical input device into Echerer’s method of processing cursored user interaction because Echerer implicitly suggests “measure circumferences” for the area encircled by line segments in medical image manipulation using a cursor device (column 9, lines 1-16) and therefore suggesting an obvious modification of the Echerer’s method for processing a radiograph. Moreover, both references have addressed the same subject matter relating to the method for processing radiographic images (Echerer’s abstract and Fenster’s abstract).
- (e) One having the ordinary skill in the art would have been motivated to do this because it would have enabled a user of the graphical input device to measure a variety of image

quantities such as distances and areas of the medical image within the image plane to allow the display technique to be used in clinical ultrasound machine and computer (column 23, lines 25-39, column 24, lines 20-35).

14. **Claim 9:**

The claim 9 encompasses the same scope of invention as that of any of Claims 2 to 8 except additional claimed limitation of assigning a pixel staticizing to an assigned geometrical entity. However, Echerer further discloses the claimed limitation of assigning a pixel staticizing to an assigned geometrical entity (column 9, lines 1-23, column 15, lines 9-11).

15. **Claims 14-18:**

The claim 14, 15, 16, 17, 18 encompasses the same scope of invention as that of claim 5, 6, 7, 8, 9 except additional claimed limitation of “an apparatus”. However, Echerer further discloses the claimed limitation of “an apparatus” (column 5, lines 12-37).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vining U.S. Pat. No. 6,083,162 discloses a method and system for effecting interactive, three-dimensional renderings of selected body organs for purposes of medical observation and diagnosis wherein the invention has included measuring distances, areas, circumferences and volumes directly from the three-dimensional medical image.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 395-3900.

jcw
April 13, 2003



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600